

Sinus Problems and Sinusitis

Did you know?

Sinus problems affect an estimated 30 to 35 million Americans. There are four pairs of sinuses in the head that help control the temperature and humidity of the air reaching the lungs. Sinuses begin as pea sized pouches in a newborn, extending outward from the inside of the nose into the bones of the face and skull. They expand and grow from childhood into young adulthood. They are air pockets, cavities that are lined with the same kind of membranes lining the nose, and are connected to the inside of the nose through small openings about the size of a pencil lead.

Normally, the nose and sinuses produce between a pint and a quart of mucus secretions every day. This passes into and through the nose, picking up dust particles, bacteria and other air pollutants along the way. The mucus is swept to the back of the throat by millions of tiny hairlike structures (cilia), which line the nasal cavity, and the mucus is swallowed. In the stomach acids destroy any dangerous bacteria. Most people do not notice this mucus flow because it is just a normal bodily function.

What can cause sinus problems?

When the openings into the sinuses become plugged, sinus pressure develops and the nose may feel blocked. These blockages may be caused by infections, irritants, anatomic (physical) problems, and allergies. Sinus disease can be common among family members, and stress may play a role in chronic sinus problems.

Infections

Most adults have colds (viral upper respiratory infections) about three times a year. Children normally have about six to sixteen colds or viral respiratory illnesses a year. When the mucus changes from clear to yellow or green, it usually means a bacterial infection has developed. Viral and bacterial infections cause swelling of the tissues inside the nose and thickening of the normal mucus. This can slow down or even stop normal sinus drainage.

Irritants and Allergies

Air pollution, cigarette smoke, and chemical irritants may cause swelling and blockage of the narrow channels from the nose to the sinuses. Allergies cause swelling and inflammation inside the nose. Common symptoms of an allergic reaction include nasal stuffiness, runny nose, sneezing and itchy, watery eyes. The nose and sinus membranes swell and become blocked, leading into a sinus infection.

Anatomic problems

In some people, the cartilage and bone in the center of the nose (the septum) can be shifted to one side through injury while others may be born that way. If this shift is severe, sinus drainage on that side of the nose can be affected. This can lead to complete closure of one or several of the sinus channels. Mucus then builds up behind these obstructions and causes sinus infections. If the swelling becomes severe the

lining of the sinuses can grow excessively. These growths are called polyps, which can cause further blockage of the sinus channels. Trapped or stagnant mucus provides a breeding ground for bacterial growth and infection.

Diagnosis and Treatment

Sinusitis is very common but sometimes it can be difficult to diagnose a chronic sinus infection, especially in small children. Sometimes the symptoms are not typical. Many of the symptoms of a sinus infection are also symptoms of other common childhood illnesses. Before starting treatment a complete examination of the nose, throat, ears, and neck is performed. Often small telescopes are used to examine deep inside the nose. A CAT (computed axial tomography) scan may be necessary to determine the extent of sinus disease.

In the case of chronic sinusitis, medical treatment includes antibiotics, nasal steroid sprays, saline (salt water) sprays to the nose, oral decongestants, and sometimes even oral steroids. Unless the patient's allergy symptoms are very severe, an antihistamine is not usually used. Often the antibiotics may need to be given for four to six continuous weeks.

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